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## **CLAIMS**

## What is claimed is:

- A vehicle master clutch engagement method, comprising the steps of: determining a throttle operating parameter value; and setting an operating mode of the clutch (16) based on the throttle operating parameter value.
- 2. The method of Claim 1, wherein the throttle operating parameter value corresponds to one of throttle position, throttle application rate and acceleration of throttle application.
- 3. The method of Claim 1, wherein the step of setting the operating mode is further defined by engaging clutch (16) at an increasingly aggressive rate when the throttle operating parameter value is increasing.
- 4. The method of Claim 1, further including the steps of determining at least one vehicle operating condition, comparing the vehicle operating condition to a predetermined limit, and setting the operating mode of the clutch (16) based on the comparison step.
  - 5. A vehicle master clutch engagement method, comprising the steps of: determining a throttle operating parameter value; comparing the throttle operating parameter value to a threshold value; and setting an operating mode of the clutch (16) based on the comparison step.
- 6. The method of Claim 5, wherein the throttle operating parameter value corresponds to one of throttle position, throttle application rate and acceleration of throttle application.

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7. The method of Claim 5, wherein the operating mode comprises engaging the clutch (16) at a least aggressive rate when the throttle operating parameter value is less than or substantially equal to a first threshold value.

- 8. The method of Claim 7, wherein the operating mode comprises engaging the clutch (16) at a faster rate than the least aggressive rate when the throttle operating parameter value is greater than the first threshold value.
- 9. The method of Claim 5, wherein the operating mode comprises engaging the clutch (16) at a least aggressive rate when no throttle operating parameter value is determined.
- 10. A control system for engaging a vehicular master clutch (16) that comprises an electronic control unit (28) for receiving signals (THL) corresponding to a throttle operating parameter value, the electronic control unit (28) setting an operating mode of the clutch (16) based on the throttle operating parameter value.
- 11. The system of Claim 10, wherein the throttle operating parameter value corresponds to one of throttle position, throttle application rate and acceleration of throttle application.
- 12. The system of Claim 10, wherein the operating mode comprises engaging the clutch (16) at an increasingly aggressive rate when the throttle operating parameter value is increasing.
- 13. The system of Claim 10, wherein the electronic control unit (28) receives signals corresponding to a vehicle operating condition, compares the vehicle operating condition to a predetermined limit, and sets the operating mode of the clutch (16) based at least in part on the comparison.
- 14. A control system for engaging a vehicle master clutch (16), said system comprising:

a processor-based controller (28);

at least one sensor (40) for sensing at least one throttle operating parameter and providing an output signal (THL) to said controller (28) indicative thereof; and

wherein the controller 28 determines a throttle operating parameter value based on the received output signal (THL), compares the throttle operating parameter value to a threshold value, and sets an operating mode of the vehicle master clutch (16) based on the comparison between the throttle operating parameter value and the threshold value.

- 15. The system of Claim 14, wherein the throttle operating parameter value corresponds to one of throttle position, throttle application rate and acceleration of throttle application.
- 16. The system of Claim 14, wherein the operating mode comprises engaging the clutch (16) at a least aggressive rate when the throttle operating parameter value is less than or substantially equal to a first threshold value.
- 17. The system of Claim 16, wherein the operating mode comprises engaging the clutch (16) at a faster rate than the least aggressive rate when the throttle operating parameter value is greater than the first threshold value.
- 18. The system of Claim 14, wherein the operating mode comprises engaging the clutch (16) at a least aggressive rate when no throttle operating parameter value is determined.
- 19. A vehicle master clutch engagement method for use with a vehicle that includes a fuel controlled engine, a master clutch and a transmission, the method comprising the steps of:

determining a desired fueling rate of the engine; and

setting an engagement rate of the clutch (16) based on the desired fueling rate of the engine.